Alberta
HUMAN RESOURCES AND EMPLOYMENT

the people & workplace department

September 2001

# Occupational Injuries and Diseases in Alberta

## Forestry and Related Industries 1996 to 2000

## Lost-Time Claims and Claim Rates

102-07169/

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# 1. Introduction

*The Mission of Alberta Human Resources and Employment*

One of the missions of Alberta Human Resources and Employment is to work in partnership with Albertans to promote safe and healthy workplaces, a quality working life and comprehensive safety systems. To this end, the department recognizes that monitoring health and safety in Alberta will help to ensure that primary workplace health and safety concerns are actively managed and prioritized and resources directed where most needed.

This report summarizes the lost-time injuries and disease claims accepted by the WCB-Alberta, characteristics of the injured worker and the risk of injury to workers in Alberta's forest and related industry between the years 1995 and 1999. A summary of occupational fatalities accepted by the Workers' Compensation Board (WCB) and detailed description of those fatalities investigated by Occupational Health and Safety (OHS) are also provided. Cost of lost-time injuries and revenue in terms of premiums are also provided.

The purpose of this report is to provide government, employers, workers, and health and safety officers in Alberta's forestry industry information about the industry key health and safety issues

The Forest industry in this report includes Primary Forest Activities and Forest Product Manufacturing.

## 2. Primary Forest Activities

For the sake of simplicity, primary forest activities will be called forestry in this report. This activity is made up of two industries: Logging and Woodlands Operations and Timber Management.

### 2.1 Industry Descriptions

***Logging and Woodlands Operations, Including Trucking of Logs (Industry # 03100)***

The business activity of logging in Alberta relates specifically to the physical harvesting of trees. Often referred to as "stump to dump" logging, the activities comprise all elements of harvesting including the transport of logs to a mill. Logging is performed both on crown land, through various forms of timber disposition, and on private land.

Logging contractors may perform all harvest activities from cutting to delivery; however, they will often contact out specialized functions of their harvest requirements. Such specialized contractors, when active in logging contacts, are covered under this industry. This is particularly common where trucking of logs is concerned.

Logging can be performed conventionally, using chain saws and line skidders or mechanically, using equipment such as; feller bunchers, grapple skidders, delimbers, harvesters, forwarders and loaders. Both conventional and mechanical logging methods form part of this industry.

In Alberta, it has become common for mill operators to hold logging rights (generally under Forest Management Agreements-FMA's) and contract out the harvesting. The mill operators co-ordinate the harvesting through "woodlands administration" division. Woodlands administration refers to forest technicians, foresters and their support staff. Woodlands administration is considered to be a normal function of a mill and when conducted by the mill operator's own workers, it does not require a separate classification. Woodlands administration, when conducted by the independent third parties under contract to the mill, will be classified according to the service provided, generally industry 3902.

***Timber Management (Industry # 03902)***

This classification addresses those activities carried on as a separate business within the forest industries, outside of logging or log processing. Employers in this industry do no logging, trucking of logs, sawing or handling of logs, nor do they use any equipment or tools of any significant size.

*Planting* of seedlings is performed with a variety of hand tools designed to punch a hole in the ground into which a seedling is placed. Check plots are performed on recently planted areas as a visual inspection intended to determined the effectiveness of the planters' work.

*Regeneration Surveys* are the inspection of logged areas to determine natural stocking levels. The cut block is divided into a grid pattern of equal spacing. Each point in the grid is inspected for a one square metre area in an effort to locate natural regeneration (seedling). Unstocked blocks will require planting and seedling. The only tool used in regeneration surveys are small hand rakes for clearing tall grass and debris

*Timber Cruising* is a method of determining tree stand volumes, type and condition. Performed in pairs, timber cruisers follow predetermined compass bearing to arrive at numerous randomly selected plots. At the plots the timber cruisers use a variety of hand held measuring instruments to measure and record information needed to formulate harvest plans.

*Block Layout* is the marking of the cut block boundaries. Performed in pairs, this activity involves following predetermined compass bearing or natural stand boundaries while marking trees with seismic ribbon or spray paint.

*Cone Picking* is the natural gathering of cones to be used for seed. Often cone picking takes place in recently logged areas where cones are readily accessible in the remaining branches of the harvested trees.

*Log Scaling* is a method of determining volumes of harvested trees. Log scalers often work at the unloading deck of a mill but may scale logs at individual cut block landings. Using a calibrated measuring stick and a can of spray paint, the scaler considers diameter, length and wood rot to determine wood volumes.

*Stand Tending* is the process where competing vegetation is removed from immature stands to allow for optimum growing conditions. Small trees and vegetation are removed at predetermined spacing using brush cutters. This is a pre-commercial form of thinning. Power saws (chainsaws) are not to be included in this classification.

# 3. Lost-Time Claims (LTC) and Claim Rates: Forestry

***Forestry***

| Year | # of Accounts | Cost | Person Years | Days Lost | Duration Rate | LTCs | LTC Rate |
|---|---|---|---|---|---|---|---|
| 1996 | 2,964 | $1,832,357 | 5,254 | 14,997 | 285 | 248 | 4.7 |
| 1997 | 2,821 | $2,077,085 | 5,379 | 12,866 | 239 | 241 | 4.5 |
| 1998 | 2,785 | $1,458,379 | 5,564 | 11,956 | 215 | 227 | 4.1 |
| 1999 | 2,793 | $996,034 | 5,560 | 13,074 | 235 | 256 | 4.6 |
| 2000 | 2,722 | $2,201,082 | 5,352 | 13,575 | 254 | 276 | 5.2 |

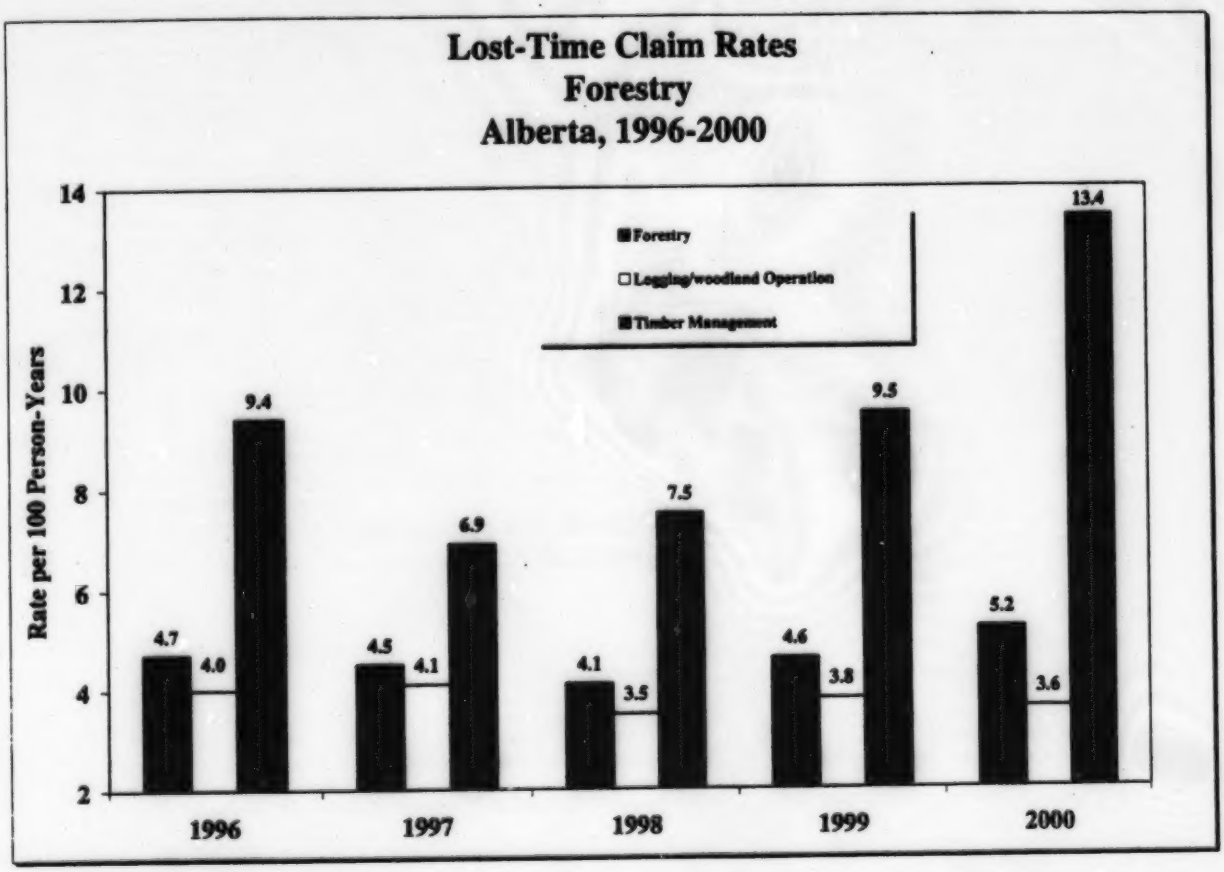
## 3.1 Lost-Time Claim Rates by Industry

***3100-Logging and Woodland Operations***

| Year | # of Accounts | Cost | Person Years | Days Lost | Duration Rate | LTCs | LTC Rate |
|---|---|---|---|---|---|---|---|
| 1996 | 2,839 | $1,711,024 | 4,524 | 13,194 | 292 | 179 | 4.0 |
| 1997 | 2,690 | $1,961,420 | 4,610 | 11,465 | 249 | 188 | 4.1 |
| 1998 | 2,651 | $1,350,038 | 4,768 | 10,123 | 212 | 167 | 3.5 |
| 1999 | 2,634 | $867,128 | 4,772 | 11,116 | 233 | 181 | 3.8 |
| 2000 | 2,568 | $1,977,556 | 4,525 | 11,015 | 243 | 165 | 3.6 |

***3902-Timber Management***

| Year | # of Accounts | Cost | Person Years | Days Lost | Duration Rate | LTCs | LTC Rate |
|---|---|---|---|---|---|---|---|
| 1996 | 125 | $121,333 | 730 | 1,803 | 247 | 69 | 9.4 |
| 1997 | 131 | $115,665 | 769 | 1,401 | 182 | 53 | 6.9 |
| 1998 | 134 | $108,341 | 796 | 1,833 | 230 | 60 | 7.5 |
| 1999 | 159 | $128,907 | 788 | 1,958 | 248 | 75 | 9.5 |
| 2000 | 154 | $223,526 | 827 | 2,560 | 310 | 111 | 13.4 |

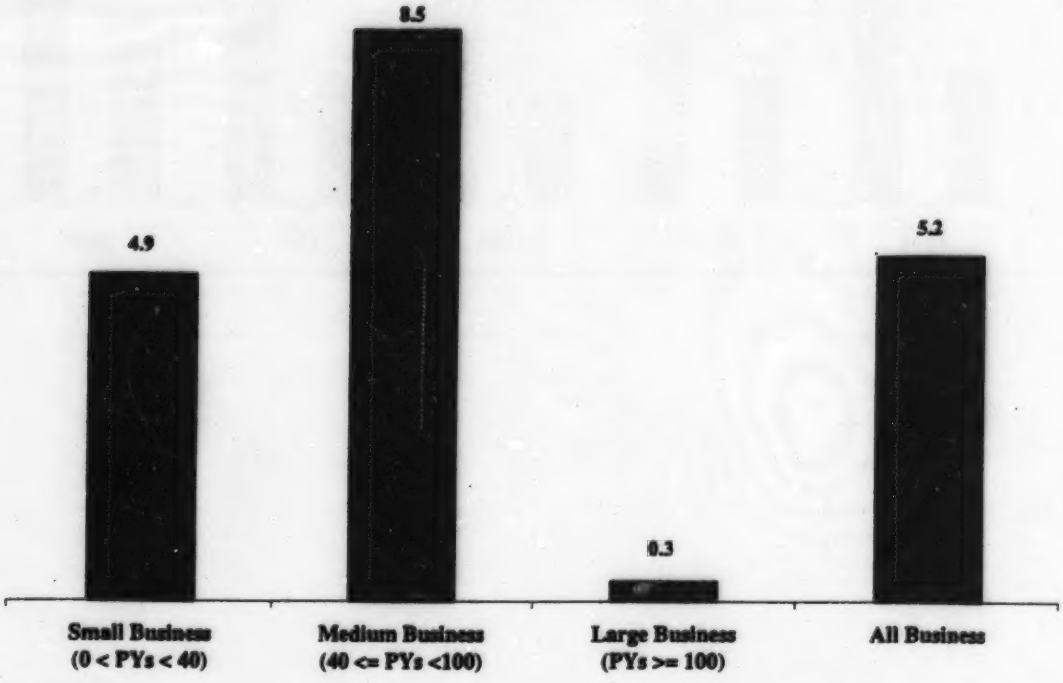

Lost-Time Claim Rates
Forestry
Alberta, 1996-2000
Rate per 100 Person-Years
14
12
10
8
6
4
2
Forestry
Logging/woodland Operation
Timber Management
4.7
4.0
9.4
4.5
4.1
6.9
4.1
3.5
7.5
4.6
3.8
9.5
5.2
3.6
13.4
1996
1997
1998
1999
2000

## 3.2 LTC Rates by Size of Employer: 2000

***Forestry***

| Size of Employer | # of Accounts | LTCs | Person - Years | LTC Rate |
|---|---|---|---|---|
| A: 0 <= PYs < 1 | 1,942 | 37 | 673 | 5.5 |
| B: 1 <= PY < 5 | 582 | 54 | 1,259 | 4.3 |
| C: 5 <= PYs < 10 | 100 | 24 | 683 | 3.5 |
| D: 10 <= PYs < 20 | 44 | 28 | 587 | 4.8 |
| E: 20 <= PYs < 40 | 37 | 60 | 969 | 6.2 |
| F: 40 <= PYs < 100 | 15 | 72 | 845 | 8.5 |
| G: PYs >= 100 | 2 | 1 | 336 | 0.3 |
| Total | 7 722 | 276 | 5,352 | 5.2 |

**Lost-Time Claim Rates by Size of Employer**
**Forestry: 2000**



# 4. Analysis of the Lost-Time Claims: Forestry

## 4.1 Nature of Injury

| LOST-TIME CLAIMS ALBERTA: 1996 TO 2000 | OCCURRENCE YEAR | | | | | Total | |
|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | Number | Percent |
| SPRAIN, STRAIN, TEARS | 76 | 80 | 82 | 94 | 74 | 406 | 32.5 |
| FRACTURE/DISLOCATION | 39 | 46 | 40 | 36 | 34 | 195 | 15.6 |
| SURFACE WOUNDS, BRUISES | 46 | 31 | 29 | 37 | 52 | 195 | 15.6 |
| OTHER TRAUMATIC INJURY/DISEASE | 30 | 24 | 18 | 32 | 52 | 156 | 12.5 |
| OPEN WOUNDS | 22 | 30 | 25 | 19 | 22 | 118 | 9.5 |
| SYSTEMATIC DISEASES, DISORDERS | 9 | 9 | 17 | 21 | 20 | 76 | 6.1 |
| NATURE - UNS | 14 | 12 | 12 | 14 | 17 | 69 | 5.5 |
| MULTIPLE DISEASE/DISORDERS | 7 | 3 | 2 | 2 | . | 14 | 1.1 |
| BURNS | 3 | 4 | 1 | 1 | 2 | 11 | 0.9 |
| SYMPTONS, SIGN/ILL | 1 | 2 | . | . | 2 | 5 | 0.4 |
| INFECTIOUS/PARASITIC DISEASE | 1 | . | . | . | 1 | 2 | 0.2 |
| OTHER DISEASE/DISORDERS | . | . | 1 | . | . | 1 | 0.1 |
| Total | 248 | 241 | 227 | 256 | 276 | 1,248 | 100.0 |

## 4.2 Duration of Disability

| LOST-TIME CLAIMS ALBERTA: 1996 TO 2000 | OCCURRENCE YEAR | | | | | Total | |
|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | Number | Percent |
| SPRAIN, STRAIN, TEARS | 76 | 80 | 82 | 94 | 74 | 406 | 32.5 |
| FRACTURE/DISLOCATION | 39 | 46 | 40 | 36 | 34 | 195 | 15.6 |
| SURFACE WOUNDS, BRUISES | 46 | 31 | 29 | 37 | 52 | 195 | 15.6 |
| OTHER TRAUMATIC INJURY/DISEASE | 30 | 24 | 18 | 32 | 52 | 156 | 12.5 |
| OPEN WOUNDS | 22 | 30 | 25 | 19 | 22 | 118 | 9.5 |
| SYSTEMATIC DISEASES, DISORDERS | 9 | 9 | 17 | 21 | 20 | 76 | 6.1 |
| NATURE - UNS | 14 | 12 | 12 | 14 | 17 | 69 | 5.5 |
| MULTIPLE DISEASE/DISORDERS | 7 | 3 | 2 | 2 | . | 14 | 1.1 |
| BURNS | 3 | 4 | 1 | 1 | 2 | 11 | 0.9 |
| SYMPTONS, SIGN/ILL | 1 | 2 | . | . | 2 | 5 | 0.4 |
| INFECTIOUS/PARASITIC DISEASE | 1 | . | . | . | 1 | 2 | 0.2 |
| OTHER DISEASE/DISORDERS | . | . | 1 | . | . | 1 | 0.1 |
| Total | 248 | 241 | 227 | 256 | 276 | 1,248 | 100.0 |

## 4.3 Part of Body Injured

| LOST-TIME CLAIMS ALBERTA: 1996 TO 2000 | OCCURRENCE YEAR | | | | | Total | |
|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | Number | Percent |
| BACK | 36 | 52 | 39 | 55 | 53 | 235 | 18.8 |
| LEG(S) | 50 | 40 | 27 | 31 | 40 | 188 | 15.1 |
| OTHER TRUNK | 32 | 35 | 38 | 38 | 33 | 176 | 14.1 |
| ANKLE(S) & FOOT(FEET)-NOT TOES | 32 | 28 | 29 | 29 | 35 | 153 | 12.3 |
| HAND(S) | 18 | 12 | 23 | 26 | 27 | 106 | 8.5 |
| FINGER(S) | 17 | 16 | 19 | 9 | 14 | 75 | 6.0 |
| MULTIPLE BODY PARTS | 20 | 9 | 12 | 18 | 15 | 74 | 5.9 |
| OTHER HEAD | 11 | 18 | 7 | 9 | 16 | 61 | 4.9 |
| OTHER UPPER EXTREMITIES | 6 | 12 | 12 | 15 | 12 | 57 | 4.6 |
| EYE(S)-OPTIC NERVE,VISION | 12 | 2 | 9 | 12 | 21 | 56 | 4.5 |
| NECK | 6 | 9 | 9 | 12 | 6 | 42 | 3.4 |
| OTHER LOWER EXTREMITIES | 6 | 5 | 2 | 2 | 3 | 18 | 1.4 |
| BODY SYSTEMS | 2 | 3 | . | . | 1 | 6 | 0.5 |
| OTHER BODY PARTS | . | . | 1 | . | . | 1 | 0.1 |
| Total | 248 | 241 | 227 | 256 | 276 | 1,248 | 100.0 |

## 4.4 Type of Event/Exposure

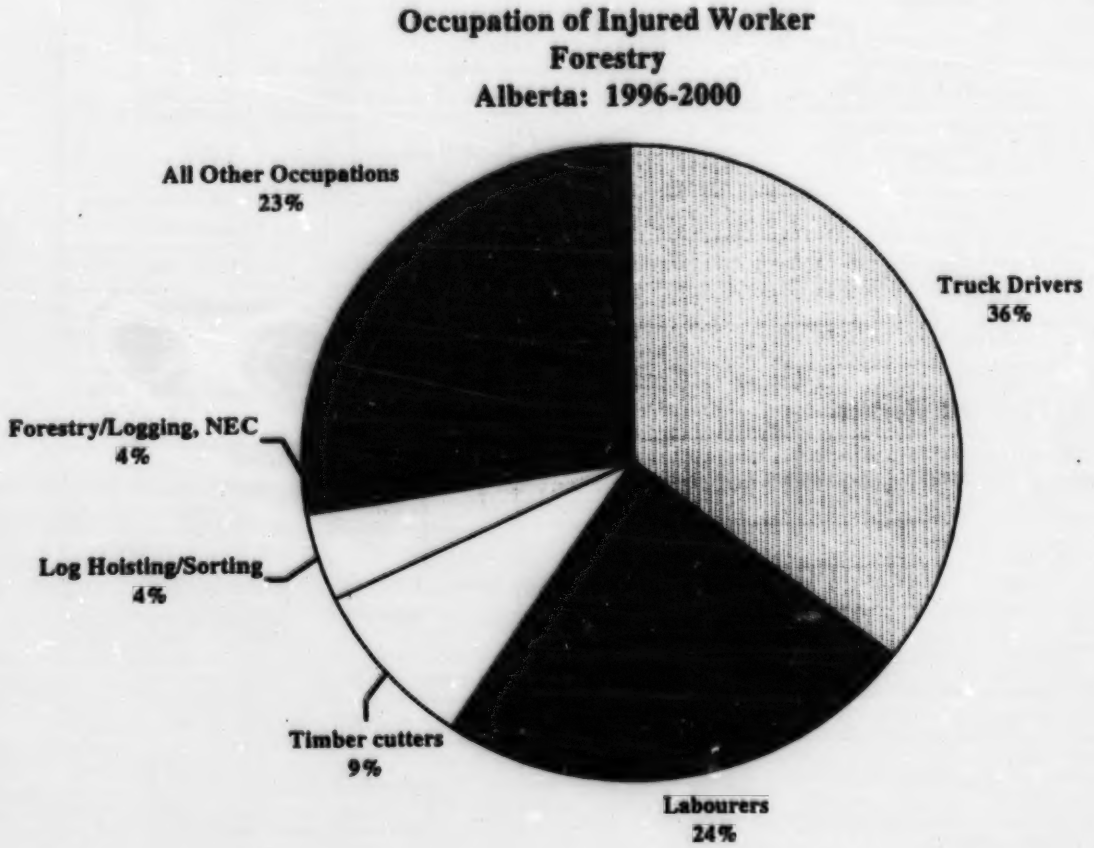
| LOST-TIME CLAIMS ALBERTA: 1996 TO 2000 | OCCURRENCE YEAR | | | | | Total | |
|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | Number | Percent |
| UNKNOWN | 29 | 33 | 29 | 30 | 25 | 146 | 11.7 |
| STRUCK BY OBJECTS | 61 | 54 | 36 | 34 | 46 | 231 | 18.5 |
| TRANSPORTATION ACCIDENTS | 29 | 33 | 25 | 39 | 44 | 170 | 13.6 |
| BODILY REACTION | 21 | 22 | 23 | 28 | 33 | 127 | 10.2 |
| OVEREXERTION | 22 | 23 | 23 | 25 | 29 | 122 | 9.8 |
| FALL ON SAME LEVEL | 21 | 18 | 21 | 34 | 25 | 119 | 9.5 |
| FALL TO LOWER LEVEL | 19 | 17 | 19 | 13 | 13 | 81 | 6.5 |
| STRUCK AGAINST OBJECTS | 11 | 11 | 9 | 12 | 15 | 58 | 4.6 |
| CAUGHT IN OBJECTS | 12 | 11 | 12 | 8 | 14 | 57 | 4.6 |
| REPETITIVE MOTIONS | 4 | 3 | 6 | 12 | 17 | 42 | 3.4 |
| OTHER FALLS | 3 | 8 | 10 | 8 | 1 | 30 | 2.4 |
| EXPOSURE TO HARMFUL SUBSTANCES | 5 | 8 | 7 | 3 | 7 | 30 | 2.4 |
| RUBBED OR ABRADED | 8 | . | 3 | 6 | 5 | 22 | 1.8 |
| OTHER BODILY REACTION/EXERTION | . | . | 1 | 2 | 1 | 4 | 0.3 |
| FIRES AND EXPLOSIONS | 2 | . | . | . | 1 | 3 | 0.2 |
| OTHER CONTACT W/ OBJECT/EQUIP | . | . | 1 | 2 | . | 3 | 0.2 |
| OTHER ASSAULTS/VIOLENT | 1 | . | 1 | . | . | 2 | 0.2 |
| ASSAULT/VIOLENT ACT BY PERSON | . | . | 1 | . | . | 1 | 0.1 |
| Total | 248 | 241 | 227 | 256 | 276 | 1,248 | 100.0 |

## 4.5 Source of Injury

| LOST-TIME CLAIMS ALBERTA: 1996 TO 2000 | OCCURRENCE YEAR | | | | | Total | |
|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | Number | Percent |
| UNKNOWN | 46 | 52 | 38 | 53 | 36 | 225 | 18.0 |
| OTHER PLANTS/ANIMALS/MINERALS | 58 | 45 | 32 | 35 | 41 | 211 | 16.9 |
| VEHICLES | 29 | 35 | 26 | 38 | 49 | 177 | 14.2 |
| PERSONS-INJURED WORKER | 24 | 25 | 31 | 42 | 49 | 171 | 13.7 |
| STRUCTURES/SURFACES | 28 | 26 | 35 | 38 | 25 | 152 | 12.2 |
| PARTS & MATERIALS | 16 | 21 | 22 | 12 | 12 | 83 | 6.7 |
| MACHINERY | 10 | 7 | 11 | 12 | 16 | 56 | 4.5 |
| OTHER SOURCES | 9 | 5 | 6 | 7 | 15 | 42 | 3.4 |
| HANDTOOLS-POWERED | 8 | 12 | 4 | 6 | 6 | 36 | 2.9 |
| HANDTOOLS-UNPOWERED | 6 | 6 | 7 | 3 | 9 | 31 | 2.5 |
| CONTAINERS | 8 | 2 | 5 | 8 | 7 | 30 | 2.4 |
| OTHER TOOLS/EQUIPMENT | 2 | 1 | 4 | 1 | 5 | 13 | 1.0 |
| PLANTS & ANIMALS | 2 | . | 3 | . | 3 | 8 | 0.6 |
| CHEMICAL/CHEMICAL PRODUCTS | 1 | 2 | 1 | 1 | . | 5 | 0.4 |
| MINERAL-METALS/NONMETALS | 1 | 1 | 1 | . | 1 | 4 | 0.3 |
| FURNITURE & FIXTURES | . | 1 | . | . | 2 | 3 | 0.2 |
| PERSONS-NOT THE INJURED WORKER | . | . | 1 | . | . | 1 | 0.1 |
| Total | 248 | 241 | 227 | 256 | 276 | 1,248 | 100.0 |

# 5. Characteristics of the Injured Worker

## 5.1 Occupation[1] of Injured worker




[1] None of the individual occupations belonging to the 'all other occupation' category accounted for more than 3% of the total lost-time claims.

## 5.2 Length of Time Employed

| LOST-TIME CLAIMS ALBERTA: 1996 TO 2000 | OCCURRENCE YEAR | | | | | Total | |
|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | Number | Percent |
| Length of Time Employed | | | | | | | |
| A. LESS THAN 1 MONTH | 65 | 54 | 40 | 39 | 47 | 245 | 19.6 |
| B. 1 MONTH TO < 6 MONTHS | 75 | 71 | 68 | 94 | 99 | 407 | 32.6 |
| C. 6 MONTHS TO < 1 YEAR | 10 | 12 | 10 | 17 | 11 | 60 | 4.8 |
| D. 1 YEAR OR MORE | 22 | 30 | 57 | 41 | 39 | 189 | 15.1 |
| E. TIME-UNSPECIFIED | 76 | 74 | 52 | 65 | 80 | 347 | 27.8 |
| SUBTOTAL | 248 | 241 | 227 | 256 | 276 | 1,248 | 100.0 |
| Total | 248 | 241 | 227 | 256 | 276 | 1,248 | 100.0 |

## 5.3 Age of injured Worker

| LOST-TIME CLAIMS ALBERTA: 1996 TO 2000 | OCCURRENCE YEAR | | | | | Total | |
|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | Number | Percent |
| Age of Injured Worker | | | | | | | |
| 15-19 YEARS | 17 | 10 | 14 | 10 | 16 | 67 | 5.4 |
| 20-24 YEARS | 57 | 45 | 44 | 59 | 75 | 280 | 22.4 |
| 25-34 YEARS | 79 | 65 | 58 | 67 | 75 | 344 | 27.6 |
| 35-44 YEARS | 54 | 71 | 62 | 63 | 50 | 300 | 24.0 |
| 45-54 YEARS | 29 | 35 | 28 | 41 | 32 | 165 | 13.2 |
| 55-64 YEARS | 8 | 12 | 15 | 12 | 22 | 69 | 5.5 |
| 65 YRS AND OVER | 3 | 2 | 5 | 2 | 4 | 16 | 1.3 |
| AGE-UNSPECIFIED | 1 | 1 | 1 | 2 | 2 | 7 | 0.6 |
| SUBTOTAL | 248 | 241 | 227 | 256 | 276 | 1,248 | 100.0 |
| Total | 248 | 241 | 227 | 256 | 276 | 1,248 | 100.0 |

## 5.4 Gender of Injured Worker

| LOST-TIME CLAIMS ALBERTA: 1996 TO 2000 | OCCURRENCE YEAR | | | | | Total | |
|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | Number | Percent |
| Gender of Injured Worker | | | | | | | |
| MALE | 222 | 221 | 201 | 223 | 228 | 1,095 | 87.7 |
| FEMALE | 17 | 17 | 20 | 27 | 40 | 121 | 9.7 |
| GENDER-UNSPECIFIED | 9 | 3 | 6 | 6 | 8 | 32 | 2.6 |
| SUBTOTAL | 248 | 241 | 227 | 256 | 276 | 1,248 | 100.0 |
| Total | 248 | 241 | 227 | 256 | 276 | 1,248 | 100.0 |

## 6. Cost of Claims and Employer Premiums

**Forestry**

| | OCCURRENCE YEAR | | | | |
|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 |
| **TRANSACTION YEAR** | | | | | |
| 1996 | $1,585,332 | | | | |
| 1997 | $723,995 | $1,677,429 | | | |
| 1998 | $557,741 | $1,077,440 | $1,165,858 | | |
| 1999 | $333,236 | $1,051,096 | $831,214 | $1,136,581 | |
| 2000 | $1,061,582 | $700,178 | $412,640 | $778,066 | $1,423,779 |
| **Total Cost** | **$4,261,886** | **$4,506,144** | **$2,409,711** | **$1,914,647** | **$1,423,779** |
| **Total Premiums** | **$7,616,027** | **$7,108,262** | **$6,414,172** | **$5,301,010** | **$5,880,634** |

The above cost for claims and premiums are for the five-year period 1996 through 2000.
The data is as of May 4, 20001.

The claim costs reflect amount paid on claims that have occurred in the five-year period.
The claim costs are tracked by the year of occurrence and year that the costs were transacted.

The premiums are the total premiums paid by employers for the year.

## 7. Occupational Fatalities in Forestry

An occupational fatality is the death of a worker that results from a work-related incident or exposure. Alberta Labour classifies occupational fatalities into three general categories: motor vehicle collision, workplace incident and occupational disease. Each of these is described below.

*Motor Vehicles Incidents*
Motor vehicles incidents typically involve non-industrial vehicles operating on public roads in which the fatally injured worker was either a driver or a passenger. This category also includes fatalities involving aircraft crashes, train crashes, helicopter crashes etc.

*Workplace Incidents*
Fatal workplace incidents consist of cases in which the worker dies at a work site, or as a result of injuries sustained at a work site. This is the type of fatality that Alberta Human Resources and Employment typically investigates.

*Occupational Disease*
Occupational disease fatalities consist mostly of recognized occupational disease, that is, disease known to be primarily or exclusive work-related.
Occupational diseases are usually diagnosed many years after the initial or crucial exposure to the toxic substance, and in such cases it is very difficult to determine when the exposure occurred. This category should, therefore, not be interpreted to reflect present work site hazards. This category also includes heart attacks suffered on the job.

Each year the Workers' Compensation Board (WCB) accepts occupational fatality claims for compensation. Most of the occupational disease fatalities accepted in a particular year are the result of incidents or exposure from prior years. Fatalities accepted in a year do not mean all of them happened in that year.

### Description of Forestry Fatalities Accepted by WCB
**Alberta: 1996-2000**

| YEAR | Occupational Diseases | | Motor Vehicle Incidents | | Workplace Incidents | | Total | |
|---|---|---|---|---|---|---|---|---|
| | N | % | N | % | N | % | N | % |
| 1996 | 1 | 33.3 | 0 | 0 | 2 | 66.7 | 3 | 100 |
| 1997 | 0 | 0 | 1 | 25.0 | 3 | 75.0 | 4 | 100 |
| 1998 | 0 | 0 | 1 | 100.0 | 0 | 0 | 1 | 100 |
| 1999 | 0 | 0 | 0 | 0 | 1 | 100.0 | 1 | 100 |
| 2000 | 0 | 0 | 1 | 100.0 | 0 | 0 | 1 | 100 |
| Total | 1 | 10.0 | 3 | 30.0 | 6 | 60.0 | 10 | 100 |

## 8. OHS Investigated Occupational Fatalities, 1996-2000

***Primary Forest Activity (Forestry) (6)***

YEAR: 1996 FILE: 0829
OCCUPATION: Faller AGE: 51
INDUSTRY: Logging, Woodlands Operations
EXPERIENCE: 20 years

DESCRIPTION: The faller was cutting trees in an area of mature growth. There were several large black poplar trees, which appeared partially rotten and stumps in the area showed varying quality of cut. The faller cut one tree and it was moved to the south with the skidder. The employer moved the skidder to the south. The faller cut the second tree and the faller moved away to the south to clear the area. The falling spruce tree hit a poplar tree, knocking off the top portion, which fell and struck the faller, fatally injuring him.

YEAR: 1997 FILE: 0851
OCCUPATION: Equipment Operator AGE: 36
INDUSTRY: Logging, Woodlands Operations
EXPERIENCE: Two years

DESCRIPTION: The slasher is a large machine used to cut trees into log lengths. The slasher consists of an operator's cab, a log grapple, a log deck and a large saw used to cut the trees. Two workers were preparing to remove a portion of a broken saw guard. The injured worker had positioned himself up on the frame of the saw, when the other worker activated the saw to move it up onto the slasher deck. When the saw was activated, the worker was crushed between the moving saw frame and the fixed saw guard.

YEAR: 1997 FILE: 0853
OCCUPATION: Faller AGE: 28
INDUSTRY: Logging, Woodlands Operations
EXPERIENCE: Two years

DESCRIPTION: The faller's chainsaw became stuck in a tree and he called a skidder over to push the tree so he could dislodge the saw. The skidder operator backed his machine into the tree, and in doing so, his left front tire contacted a 7-metre high dry snag, knocking it over and onto the faller who was standing 5 metres behind and to the left of the skidder. The faller received fatal head and crushing injuries.

YEAR: 1997 FILE: 0869
OCCUPATION: Tree Faller AGE: 60
INDUSTRY: Logging, Woodlands Operations
EXPERIENCE: 33 years

DESCRIPTION: The worker was a member of a crew of workers harvesting trees in a logging operation. He was operating a chain saw falling trees. He cut a large pine tree, which was supporting a leaning dry snag. When the tree that he cut fell, the dry sang came down striking the worker on his head causing fatal injuries.

| | | | |
|---|---|---|---|
| YEAR: | 1998 | FILE: | 0889 |
| OCCUPATION: | Truck Driver | AGE: | 29 |
| INDUSTRY: | Logging, Woodlands Operations, including Trucking of Logs | | |
| EXPERIENCE: | 5 years | | |

DESCRIPTION: The logging truck was loaded with three rows of short logs measuring from 3.6 to 4.8 metres in length. The truck was travelling down a grade and the driver failed to negotiate a curve near the bottom of the grade. The truck left the road and rolled over, coming to rest upside down in a creek bed beside a bridge. The driver was pinned in the cab of the truck and died from his injuries.

*Note: There was one fatality in 2000 that is still under investigation.*

# 9. Forest Product Manufacturing

This section provide a comprehensive picture of workplace health and safety in Alberta's Forest Products Manufacturing industry. Information on cost of injuries and total premiums are also presented.

*Description of Forest Product Manufacturing Industries*:

Employers in this activity may be classified into the following industries:
Sawmills and Planing Mills, Manufactures of Wood Products, Peeling and Pointing of Post, Wood Preserving, Pulp Mills, and Plywood, Chipboard, Strand board and Fibreboard Mills.

## 9.1 Industry Description

### *Sawmills & Planing Mills (Industry # 25100)*

This classification involves sawing logs into rough lumber of various imperial and metric dimensions.

Sawmills vary from one-man portable mills to large automated mills employing in excess of 100 personnel. Labour is performed largely by those trained on the job and would include equipment operators, sawyers, scalers and labourers. Large mills will employ mechanics, millwrights, welders, etc.

Logs are trucked to the mill, often weighed, off loaded and then scaled. The size of the mill dictates the complexity of the sawing process. Logs may be trimmed to length, debarked in a variety of debarking machines, and then sawn lengthwise into a cant (squared timber). The cant is further reduced into rough lumber by an edger. These processes may be manual in the case of portable mills, or highly automated using conveyers, pickers, and computer/laser guided saws in large mills.

Planing mills often accompany the large sawmill and function as a final cutting process for the lumber.

Various forms of specialized remanufacturing also forms part of this industry. This may involve cutting of grooves, bevels, edges, and may include cutting special edges on the boards such as tongue and grooves or ship lap. Re-manufacturing lumber to metric sizes for overseas markets is also prevalent in this industry.

The restoration of railway ties and the manufacture of wooden shakes are activities also included in this industry.

### *Manufacturing of Wood Products (Industry # 25401)*

Manufacturing includes cutting wood to specification, assembling and finishing the product, big and small. Activities include, but is not limited to, planing, sawing, cutting, tonguing, grooving, nailing, screwing, gluing, clamping, filling, sanding and staining or painting of product big or small.

When installing their own product, it forms part of the employer's primary manufacturing activity. This industry may include a storefront operations to sell related products and include relevant personnel and delivery. A showroom or display area may exist to present sample products.

Business may utilize saws, lathes, planers glue machines, handtools, forklifts, trucks and dust-collection equipment. A typical job mix may include carpenter-types, handymen, labourers, sales/estimators etc.

***Peeling & Pointing of Post (Industry # 25900)***

This industry covers businesses that perform the peeling and pointing of post exclusive of other lumber milling operations.

Post of uniform length are fed into a machine that rotates them much the same as a lathe at the same time peeling the bark off. One end is then ground to a point using a post pointer. The posts are usually dip-treated following the peeling and pointing.

The posts peeled and pointed in this industry are generally smaller and used by farmers, ranchers or acreage owners, although the peeling and treating of telephone poles are also included in this industry.

***Treating of Timber (Industry # 25901)***

This classification involves the coating of wood with a preservative, including items such as fence posts, hydro poles, bridge timbers and railroad ties.

Some employers in this industry are involved only in dip-treating posts and poles. The product is immersed in a preservative solution in an open tank. Square cedar post for fences are usually treated on one end only.

Another, more elaborate process uses large cylinders (often seven feet in diameter and 150 feet long). The ties, timber, post or poles to be treated are strapped to small rail carts then loaded into cylinders. The timber is then subject to pressure and heat while being treated with the appropriate preservative. Following the prescribed time (which varies by product), the preservative solution is pumped out and the timber is then vacuum-dried. The timber then leaves the cylinder and moved to a temporary storage area to drip dry. Pressure treaters usually have the capacity to peel, cut and incise their product using variety of machinery and hand tools. Some pressure treaters will slightly modify the product by predrilling holes for hardware, cutting special ends and cutting out defective areas.

The two most common preservatives are Chromated Copper Arsenate (CCA) and Pentachlorophenol (Penta).

***Pulp Mills (Industry # 27102)***

This industry covers the actual conversion of wood to wood pulp, generally to be used in paper manufacturing operations. This industry will include the manufacturing of newsprint, either done in conjunction with wood pulp manufacturing or as s separate business.

There are two types of pulp manufacturing:
-- bleached kraft pulp mills, and
-- chemithermomechanical pulp mills (CTMP)

Bleached kraft pulp mills rely on chemical processes to break down wood into pulp. CTMP mills rely on the mechanical grinding process to break down wood into pulp.

The pulp is compressed into 3 cubic ft. cubes/bundles and shipped to paper mills, which convert the pulp to paper.

All activities from receiving the logs to processing into pulp, processing into paper, shipping the finished product and marketing is included in this industry.

### *Plywood, Chipboard, Strandboard & Fibreboard Mills (Industry # 27103)*

This industry generally incorporates lumber processing other than sawmills and pulpmills. Included is plywood, chipboard, strandboard and fiberboard mill.

*Chipboard, Strandboard and Fibreboard*:
Spruce and aspen logs are cut to 2' and 3' length, then moved by conveyor to a machine that slices them into small chips or wafers. The chips are conveyed to a rotating dryer where moisture is removed, then to a chamber, where a mixture of glues and waxes is sprayed onto the chips.
The chips are dropped into trays 16' long by 4' wide, which move to a heated press. Once in place, the trays (and chips) are pressed and heated to bond the chips into a board. 8' by 4' sheet are then cut and passed to a dryer where they are rotated until cool, then stacked and prepared for shipment.

With fibreboards, it is the fibres being pressed into board rather than chips or wafers. Otherwise the processes are similar.

*Plywood:*
Trees (mostly white spruce) are debarked and cut into peelers (8' 6" long) sorted and conditioned or steamed for 10 to 35 hours. The logs are then placed on a lathe and strips of veneer are peeled off from 1/10 to 1/8 inch thick. A clipper cuts out any defects, the veneer is trimmed and sent to the plywood mill. At the mills the sheets are sorted into grades, then lined up in presses. The interior cross-banding (narrow strips) are glued on both sides and placed by hand between the layers. The sheets are glued and built up to required thickness. The ends are trimmed and the units are placed in a loading basket and put in the hot press automatically.

Employers who paint or stain board products are also included in this industry. Staining is a simple process of passing a board through a mechanical stainer (often called an Olympic Stainer). The stainer will apply stain (or paint) to both sides and the edges of the board. Boards are then stacked to dry. One person can handle this entire process.

This industry encompasses all related activities including the wholesaling and warehousing of board products.

# 10. Lost-Time Claims and Claim Rates

## All Forest Product Manufacturing

| Year | # of Accounts | Cost | Person Years | Days Lost | Duration Rate | LTCs | LTC Rate |
|---|---|---|---|---|---|---|---|
| 1996 | 929 | $2,609,430 | 20,534 | 19,228 | 94 | 1,013 | 4.9 |
| 1997 | 954 | $3,809,259 | 22,030 | 27,477 | 125 | 1,293 | 5.9 |
| 1998 | 961 | $4,287,490 | 23,653 | 29,573 | 125 | 1,357 | 5.7 |
| 1999 | 998 | $2,928,190 | 23,072 | 29,597 | 128 | 1,348 | 5.8 |
| 2000 | 1,017 | $5,715,652 | 26,334 | 32,404 | 123 | 1,460 | 5.5 |

## 10.1 Lost-Time Claims and Claim Rates by Industry

### *Industry 25100-Sawmills & Planning Mills*

| Year | # of Accounts | Cost | Person Years | Days Lost | Duration Rate | LTCs | LTC Rate |
|---|---|---|---|---|---|---|---|
| 1996 | 311 | $911,452 | 5,940 | 7,149 | 120 | 302 | 5.1 |
| 1997 | 308 | $1,358,591 | 6,474 | 9,424 | 146 | 359 | 5.5 |
| 1998 | 290 | $1,311,238 | 6,056 | 8,178 | 135 | 361 | 6.0 |
| 1999 | 301 | $1,158,139 | 6,572 | 9,875 | 150 | 373 | 5.7 |
| 2000 | 283 | $1,832,452 | 7,157 | 7,430 | 104 | 333 | 4.7 |

### *Industry 25401-Manufacturing of Wood Products*

| Year | # of Accounts | Cost | Person Years | Days Lost | Duration Rate | LTCs | LTC Rate |
|---|---|---|---|---|---|---|---|
| 1996 | 563 | $1,198,482 | 8,229 | 10,540 | 128 | 624 | 7.6 |
| 1997 | 589 | $1,896,641 | 10,479 | 15,792 | 151 | 823 | 7.9 |
| 1998 | 613 | $2,366,555 | 11,163 | 19,181 | 172 | 882 | 7.9 |
| 1999 | 642 | $1,544,590 | 11,413 | 17,996 | 158 | 870 | 7.6 |
| 2000 | 693 | $3,314,483 | 13,069 | 22,197 | 170 | 1,022 | 7.8 |

### *Industry 25900-Peeling and Pointing of Post*

| Year | # of Accounts | Cost | Person Years | Days Lost | Duration Rate | LTCs | LTC Rate |
|---|---|---|---|---|---|---|---|
| 1996 | 18 | $18,116 | 63 | 228 | N/A | 8 | 12.6 |
| 1997 | 19 | $47,360 | 63 | 443 | N/A | 9 | 14.3 |
| 1998 | 19 | $52,383 | 56 | 308 | N/A | 6 | 10.8 |
| 1999 | 13 | $8,957 | 35 | 177 | N/A | 6 | N/A |
| 2000 | 11 | $30,776 | 24 | 159 | N/A | 4 | N/A |

### *Industry 25901- Treating of Timber*

| Year | # of Accounts | Cost | Person Years | Days Lost | Duration Rate | LTCs | LTC Rate |
|---|---|---|---|---|---|---|---|
| 1996 | 5 | $16,646 | 80 | 136 | N/A | 5 | 5.7 |
| 1997 | 4 | $44,151 | 93 | 248 | N/A | 13 | 14.0 |
| 1998 | 4 | $5,876 | 89 | 66 | N/A | 8 | 8.9 |
| 1999 | 5 | $16,508 | 112 | 235 | N/A | 12 | 10.8 |
| 2000 | 6 | $73,527 | 149 | 672 | N/A | 22 | 14.7 |

### *Industry 27102 – Pulp Mills*

| Year | # of Accounts | Cost | Person Years | Days Lost | Duration Rate | LTCs | LTC Rate |
|---|---|---|---|---|---|---|---|
| 1996 | 13 | $51,642 | 4,201 | 283 | N/A | 28 | 0.7 |
| 1997 | 15 | $95,549 | 2,799 | 444 | 16 | 38 | 1.4 |
| 1998 | 15 | $201,089 | 4,103 | 663 | 16 | 38 | 0.9 |
| 1999 | 15 | $73,843 | 2,492 | 472 | 19 | 35 | 1.4 |
| 2000 | 10 | $156,951 | 3,960 | 582 | N/A | 25 | 0.6 |

*Industry 27103-Plywood/Chipboard/Strandboard*

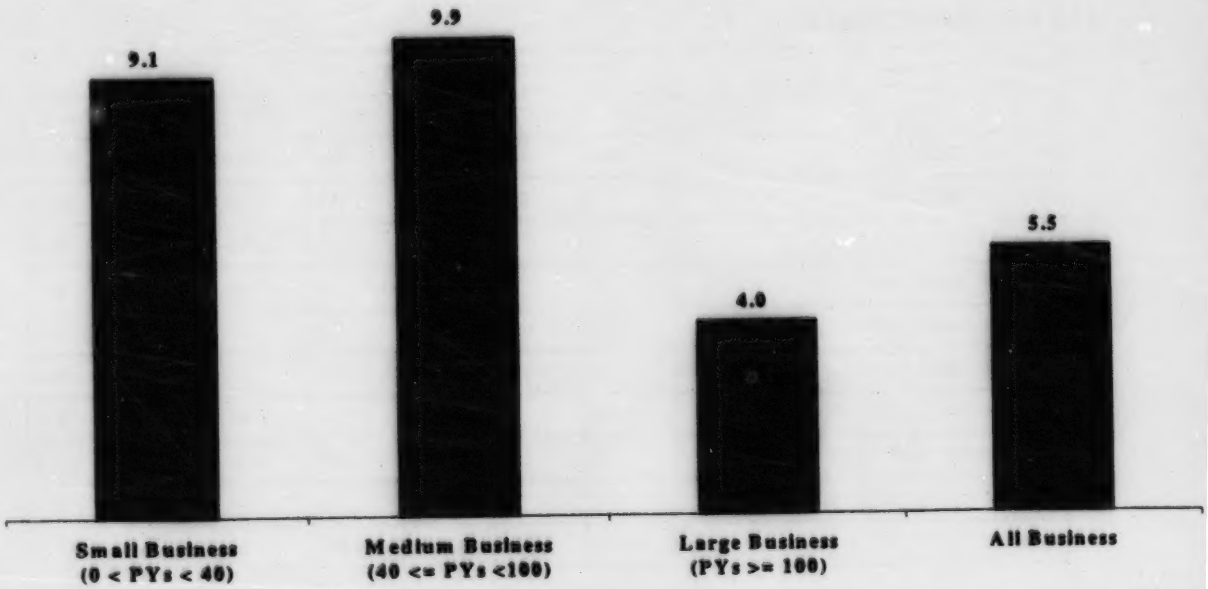
| Year | # of Accounts | Cost | Person Years | Days Lost | Duration Rate | LTCs | LTC Rate |
|---|---|---|---|---|---|---|---|
| 1996 | 19 | $413,092 | 2,013 | 892 | 44 | 46 | 2.3 |
| 1997 | 19 | $366,968 | 2,122 | 1,126 | 53 | 51 | 2.4 |
| 1998 | 20 | $350,350 | 2,186 | 1,177 | 54 | 62 | 2.8 |
| 1999 | 22 | $126,152 | 2,450 | 842 | 34 | 52 | 2.1 |
| 2000 | 14 | $307,463 | 1,974 | 1,364 | 69 | 54 | 2.7 |

## 10.2 LTC Rates by Size of Employer: 2000

***Forest Product Manufacturing***

| Size of Employer | # of Accounts | LTCs | Person - Years | LTC Rate |
|---|---|---|---|---|
| A: 0<= PYs < 1 | 391 | 8 | 150 | 5.3 |
| B: 1<= PY < 5 | 271 | 62 | 629 | 9.9 |
| C: 5 <= PYs < 10 | 99 | 58 | 739 | 7.8 |
| D: 10 <= PYs < 20 | 93 | 106 | 1,315 | 8.1 |
| E: 20 <= PYs < 40 | 62 | 187 | 1,796 | 10.4 |
| F: 40 <= PYs < 100 | 43 | 275 | 2,768 | 9.9 |
| G: PYs >=100 | 56 | 762 | 18,936 | 4.0 |
| H: Invalid | 2 | 2 | N/A | N/A |
| Total | 1,017 | 1,460 | 26,334 | 5.5 |

**LTC Rate by Size of Employer**
**Forest Product Manufacturing**
**Alberta: 2000**



# 11. Analysis of the Lost-Time Claims: Forest Product Manufacturing

## 11.1 Nature of Injury

| LOST-TIME CLAIMS ALBERTA: 1996 TO 2000 | OCCURRENCE YEAR | | | | | Total | |
|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | Number | Percent |
| SPRAIN, STRAIN, TEARS | 353 | 483 | 499 | 493 | 543 | 2,371 | 36.6 |
| OPEN WOUNDS | 210 | 269 | 274 | 237 | 227 | 1,217 | 18.8 |
| SURFACE WOUNDS, BRUISES | 168 | 173 | 204 | 208 | 210 | 963 | 14.9 |
| OTHER TRAUMATIC INJURY/DISEASE | 88 | 100 | 102 | 175 | 182 | 647 | 10.0 |
| FRACTURE/DISLOCATION | 85 | 149 | 144 | 113 | 148 | 639 | 9.9 |
| SYSTEMATIC DISEASES, DISORDERS | 43 | 72 | 80 | 68 | 90 | 353 | 5.5 |
| NATURE - UNS | 47 | 31 | 39 | 31 | 43 | 191 | 3.0 |
| BURNS | 9 | 11 | 11 | 15 | 11 | 57 | 0.9 |
| MULTIPLE DISEASE/DISORDERS | 6 | 4 | 2 | 3 | 2 | 17 | 0.3 |
| SYMPTONS, SIGN/ILL | 2 | 1 | 2 | 3 | 2 | 10 | 0.2 |
| OTHER DISEASE/DISORDERS | 2 | . | . . | 1 | 2 | 5 | 0.1 |
| INFECTIOUS/PARASITIC DISEASE | . | . | . | 1 | . | 1 | 0.0 |
| Total | 1,013 | 1,293 | 1,357 | 1,348 | 1,460 | 6,471 | 100.0 |

## 11.2 Duration of Disability

| LOST-TIME CLAIMS ALBERTA: 1996 TO 2000 | OCCURRENCE YEAR | | | | | Total | |
|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | Number | Percent |
| 01 - 05 DAYS LOST | 481 | 573 | 582 | 619 | 651 | 2,906 | 44.9 |
| 06 - 10 DAYS LOST | 167 | 208 | 194 | 171 | 175 | 915 | 14.1 |
| 11 - 15 DAYS LOST | 65 | 90 | 105 | 105 | 120 | 485 | 7.5 |
| 16 - 20 DAYS LOST | 41 | 64 | 59 | 55 | 63 | 282 | 4.4 |
| 21 - 30 DAYS LOST | 59 | 78 | 94 | 95 | 97 | 423 | 6.5 |
| 31 - 40 DAYS LOST | 31 | 56 | 66 | 56 | 52 | 261 | 4.0 |
| 41 - 50 DAYS LOST | 34 | 36 | 31 | 43 | 50 | 194 | 3.0 |
| 51 OR MORE DAYS LOST | 99 | 156 | 170 | 153 | 186 | 764 | 11.8 |
| DAYS LOST-UNSPECIFIED, 0 | 36 | 32 | 56 | 51 | 66 | 241 | 3.7 |
| Total | 1,013 | 1,293 | 1,357 | 1,348 | 1,460 | 6,471 | 100.0 |

## 11.3 Part of Body Injured

| LOST-TIME CLAIMS ALBERTA: 1996 TO 2000 | OCCURRENCE YEAR | | | | | Total | |
|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | Number | Percent |
| BACK | 235 | 299 | 302 | 297 | 344 | 1,477 | 22.8 |
| FINGER(S) | 180 | 251 | 265 | 234 | 214 | 1,144 | 17.7 |
| HAND(S) | 113 | 148 | 159 | 157 | 183 | 760 | 11.7 |
| OTHER TRUNK | 114 | 144 | 140 | 149 | 195 | 742 | 11.5 |
| ANKLE(S) & FOOT(FEET)-NOT TOES | 93 | 111 | 114 | 121 | 101 | 540 | 8.3 |
| LEG(S) | 78 | 104 | 103 | 117 | 127 | 529 | 8.2 |
| OTHER UPPER EXTREMITIES | 56 | 74 | 95 | 80 | 100 | 405 | 6.3 |
| EYE(S)-OPTIC NERVE,VISION | 40 | 48 | 52 | 58 | 55 | 253 | 3.9 |
| OTHER HEAD | 32 | 37 | 38 | 38 | 48 | 193 | 3.0 |
| NECK | 21 | 32 | 34 | 29 | 33 | 149 | 2.3 |
| MULTIPLE BODY PARTS | 23 | 12 | 33 | 35 | 36 | 139 | 2.1 |
| OTHER LOWER EXTREMITIES | 19 | 22 | 18 | 23 | 17 | 99 | 1.5 |
| BODY SYSTEMS | 7 | 9 | 1 | 8 | 4 | 29 | 0.4 |
| UNKNOWN | . | 2 | 3 | 1 | 2 | 8 | 0.1 |
| OTHER BODY PARTS | 2 | . | . | 1 | 1 | 4 | 0.1 |
| Total | 1,013 | 1,293 | 1,357 | 1,348 | 1,460 | 6,471 | 100.0 |

## 11.4 Type of Event/Exposure

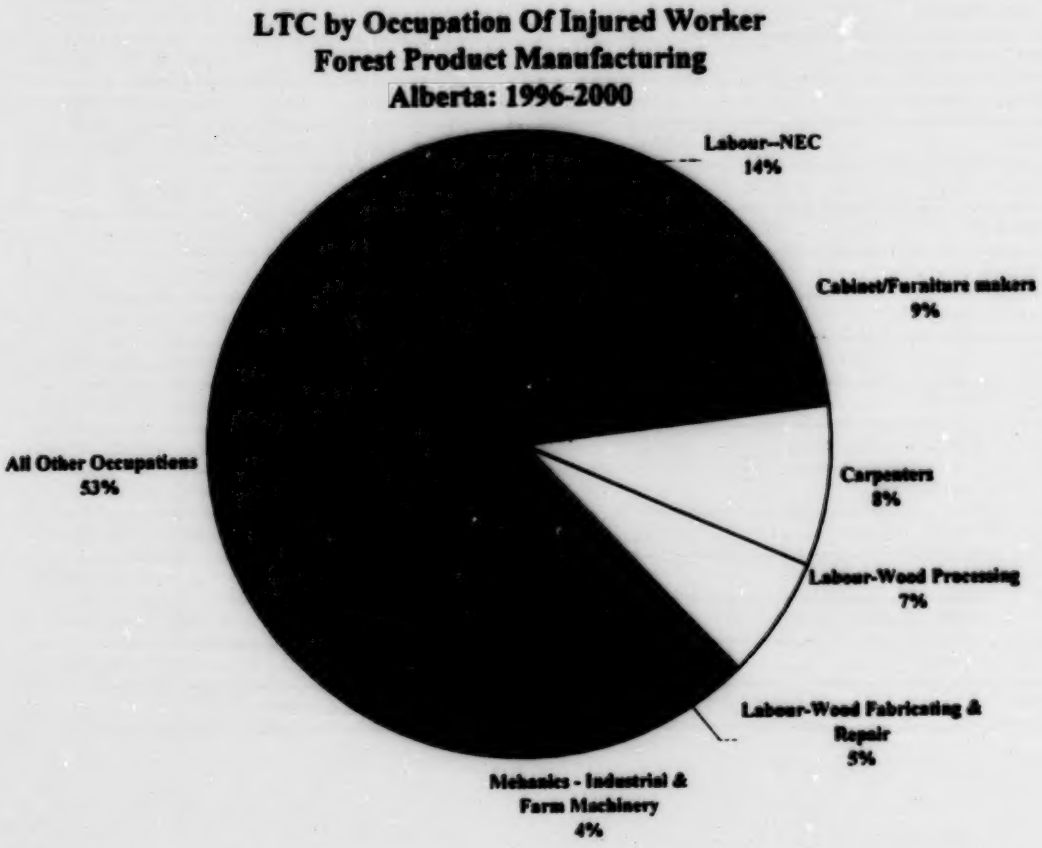
| LOST-TIME CLAIMS ALBERTA: 1996 TO 2000 | OCCURRENCE YEAR | | | | | Total | |
|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | Number | Percent |
| UNKNOWN | 121 | 89 | 110 | 110 | 110 | 540 | 8.3 |
| OVEREXERTION | 213 | 277 | 294 | 312 | 343 | 1,439 | 22.2 |
| STRUCK BY OBJECTS | 212 | 285 | 285 | 269 | 274 | 1,325 | 20.5 |
| CAUGHT IN OBJECTS | 98 | 139 | 145 | 146 | 141 | 669 | 10.3 |
| STRUCK AGAINST OBJECTS | 86 | 121 | 138 | 129 | 126 | 600 | 9.3 |
| BODILY REACTION | 84 | 121 | 115 | 112 | 118 | 550 | 8.5 |
| FALL ON SAME LEVEL | 57 | 58 | 75 | 70 | 94 | 354 | 5.5 |
| FALL TO LOWER LEVEL | 45 | 49 | 50 | 47 | 49 | 240 | 3.7 |
| REPETITIVE MOTIONS | 17 | 29 | 35 | 31 | 59 | 171 | 2.6 |
| RUBBED OR ABRADED | 24 | 33 | 30 | 31 | 37 | 155 | 2.4 |
| EXPOSURE TO HARMFUL SUBSTANCES | 25 | 32 | 19 | 43 | 35 | 154 | 2.4 |
| OTHER FALLS | 14 | 26 | 18 | 14 | 24 | 96 | 1.5 |
| TRANSPORTATION ACCIDENTS | 9 | 13 | 22 | 14 | 20 | 78 | 1.2 |
| OTHER BODILY REACTION/EXERTION | 1 | 12 | 13 | 13 | 20 | 59 | 0.9 |
| OTHER CONTACT W/ OBJECT/EQUIP | 6 | 7 | 6 | 7 | 9 | 35 | 0.5 |
| ASSAULT/VIOLENT ACT BY PERSON | 1 | 1 | 1 | . | 1 | 4 | 0.1 |
| FIRES AND EXPLOSIONS | . | 1 | 1 | . | . | 2 | 0.0 |
| Total | 1,013 | 1,293 | 1,357 | 1,348 | 1,460 | 6,471 | 100.0 |

## 11.5 Source of Injury

| LOST-TIME CLAIMS ALBERTA: 1996 TO 2000 | OCCURRENCE YEAR | | | | | Total | |
|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | Number | Percent |
| UNKNOWN | 210 | 185 | 225 | 229 | 209 | 1,058 | 16.3 |
| PARTS & MATERIALS | 217 | 324 | 326 | 348 | 359 | 1,574 | 24.3 |
| PERSONS-INJURED WORKER | 105 | 156 | 161 | 149 | 189 | 760 | 11.7 |
| STRUCTURES/SURFACES | 110 | 136 | 148 | 138 | 192 | 724 | 11.2 |
| MACHINERY | 103 | 159 | 158 | 132 | 141 | 693 | 10.7 |
| CONTAINERS | 45 | 65 | 62 | 74 | 77 | 323 | 5.0 |
| OTHER SOURCES | 41 | 49 | 58 | 51 | 66 | 265 | 4.1 |
| FURNITURE & FIXTURES | 46 | 35 | 43 | 49 | 49 | 222 | 3.4 |
| HANDTOOLS-UNPOWERED | 31 | 29 | 45 | 49 | 47 | 201 | 3.1 |
| VEHICLES | 31 | 46 | 41 | 33 | 43 | 194 | 3.0 |
| HANDTOOLS-POWERED | 23 | 35 | 23 | 27 | 30 | 138 | 2.1 |
| OTHER PLANTS/ANIMALS/MINERALS | 21 | 29 | 34 | 25 | 17 | 126 | 1.9 |
| OTHER TOOLS/EQUIPMENT | 13 | 24 | 23 | 22 | 25 | 107 | 1.7 |
| CHEMICAL/CHEMICAL PRODUCTS | 12 | 16 | 8 | 15 | 10 | 61 | 0.9 |
| MINERAL-METALS/NONMETALS | 2 | 3 | 1 | 4 | . | 10 | 0.2 |
| PERSONS-NOT THE INJURED WORKER | 3 | 1 | 1 | 1 | 3 | 9 | 0.1 |
| PLANTS & ANIMALS | . | 1 | . | 2 | 3 | 6 | 0.1 |
| Total | 1,013 | 1,293 | 1,357 | 1,348 | 1,460 | 6,471 | 100.0 |

# 12. Characteristics of the Injured Worker

## 12.1 Occupation[2] of Injured worker




[2] None of the individual occupations belonging to the 'all other occupation' category accounted for more than 3% of the total lost-time claims.

## 12.2 Length of Time Employed

| LOST-TIME CLAIMS ALBERTA: 1996 TO 2000 | OCCURRENCE YEAR | | | | | Total | |
|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | Number | Percent |
| Length of Time Employed | | | | | | | |
| A. LESS THAN 1 MONTH | 89 | 165 | 130 | 154 | 168 | 706 | 10.9 |
| B. 1 MONTH TO < 6 MONTHS | 229 | 269 | 309 | 270 | 305 | 1,382 | 21.4 |
| C. 6 MONTHS TO < 1 YEAR | 91 | 154 | 130 | 133 | 149 | 657 | 10.2 |
| D. 1 YEAR OR MORE | 319 | 407 | 502 | 514 | 496 | 2,238 | 34.6 |
| E. TIME-UNSPECIFIED | 285 | 298 | 286 | 277 | 342 | 1,488 | 23.0 |
| SUBTOTAL | 1,013 | 1,293 | 1,357 | 1,348 | 1,460 | 6,471 | 100.0 |
| Total | 1,013 | 1,293 | 1,357 | 1,348 | 1,460 | 6,471 | 100.0 |

## 12.3 Age of injured Worker

| LOST-TIME CLAIMS ALBERTA: 1996 TO 2000 | OCCURRENCE YEAR | | | | | Total | |
|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | Number | Percent |
| Age of Injured Worker | | | | | | | |
| 15-19 YEARS | 86 | 128 | 101 | 132 | 129 | 576 | 8.9 |
| 20-24 YEARS | 195 | 246 | 247 | 249 | 261 | 1,198 | 18.5 |
| 25-34 YEARS | 373 | 411 | 441 | 403 | 412 | 2,040 | 31.5 |
| 35-44 YEARS | 245 | 334 | 365 | 377 | 393 | 1,714 | 26.5 |
| 45-54 YEARS | 81 | 125 | 144 | 150 | 190 | 690 | 10.7 |
| 55-64 YEARS | 30 | 44 | 54 | 31 | 69 | 228 | 3.5 |
| 65 YRS AND OVER | 2 | 3 | 3 | 3 | 4 | 15 | 0.2 |
| AGE-UNSPECIFIED | 1 | 2 | 2 | 3 | 2 | 10 | 0.2 |
| SUBTOTAL | 1,013 | 1,293 | 1,357 | 1,348 | 1,460 | 6,471 | 100.0 |
| Total | 1,013 | 1,293 | 1,357 | 1,348 | 1,460 | 6,471 | 100.0 |

## 12.4 Gender of Injured Worker

| LOST-TIME CLAIMS ALBERTA: 1996 TO 2000 | OCCURRENCE YEAR | | | | | Total | |
|---|---|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 | Number | Percent |
| Gender of Injured Worker | | | | | | | |
| MALE | 911 | 1,120 | 1,225 | 1,175 | 1,260 | 5,691 | 87.9 |
| FEMALE | 76 | 123 | 107 | 143 | 179 | 628 | 9.7 |
| GENDER-UNSPECIFIED | 26 | 50 | 25 | 30 | 21 | 152 | 2.3 |
| SUBTOTAL | 1,013 | 1,293 | 1,357 | 1,348 | 1,460 | 6,471 | 100.0 |
| Total | 1,013 | 1,293 | 1,357 | 1,348 | 1,460 | 6,471 | 100.0 |

## 13. Cost of Claims and Employer Premiums

***Forest Product Manufacturing***

| | OCCURRENCE YEAR | | | | |
|---|---|---|---|---|---|
| | 1996 | 1997 | 1998 | 1999 | 2000 |
| **TRANSACTION YEAR** | | | | | |
| 1996 | $2,183,568 | | | | |
| 1997 | $1,517,552 | $3,200,934 | | | |
| 1998 | $861,690 | $1,784,093 | $3,533,508 | | |
| 1999 | $732,392 | $1,472,750 | $2,585,470 | $3,434,546 | |
| 2000 | $881,009 | $688,214 | $2,035,780 | $2,972,980 | $4,833,680 |
| **Total Cost** | **$6,176,211** | **$7,145,992** | **$8,154,758** | **$6,407,526** | **$4,833,680** |
| **Total Premiums** | **$18,436,139** | **$19,802,732** | **$14,765,596** | **$12,815,052** | **$9,667,361** |

The above cost of lost-time claims and premiums are for the five-year period 1996 through 2000. The data is as of May 4, 2001.

The claim costs reflect amount paid on claims that have occurred in the five-year period. The claim costs are tracked by the year of occurrence and year that the costs were transacted.

The premiums are the total premiums paid by employers for the year.

## 14. Occupational Fatalities: Forest Product Manufacturing

An occupational fatality is the death of a worker that results from a work-related incident or exposure. Alberta Labour classifies occupational fatalities into three general categories: motor vehicle collision, workplace incident and occupational disease. Each of these is described below.

*Motor Vehicles Incidents*

Motor vehicles incidents typically involve a non-industrial vehicle operating on public roads in which the fatally injured worker was either a driver or a passenger. This category also includes fatalities involving aircraft crashes, train crashes, helicopter crashes etc.

*Workplace Incidents*

Fatal workplace incidents consist of cases in which the worker dies at a work site, or as a result of injuries sustained at a work site. This is the type of fatality that Alberta Labour typically investigates.

*Occupational Disease*

Occupational disease fatalities consist mostly recognize occupational disease, that is, disease known to be primarily or exclusive work-related. Examples are asbestos and black lung disease. Occupational diseases are usually diagnosed many years after the initial or crucial exposure to the toxic substance, and in such cases it is very difficult to determine when the exposure occurred. This category should, therefore, not be interpreted to reflect present work site hazards. This category also includes heart attacks suffered on the job.

Each year the Workers Compensation Board (WCB) accepts occupational fatality claims for compensation. Most of the occupational disease fatalities accepted in a particular year are the result of incidents or exposure from prior years.

**Description of Fatalities Accepted by the WCB**
**Forest Product Manufacturing**
**Alberta: 1996-2000**

| YEAR | Occupational Diseases | | Motor Vehicle Incidents | | Workplace Incidents | | Total | |
|---|---|---|---|---|---|---|---|---|
| | N | % | N | % | N | % | N | % |
| 1996 | 1 | 33.3 | 0 | 0 | 2 | 66.7 | 3 | 100 |
| 1997 | 0 | 0 | 1 | 50.0 | 1 | 50.0 | 2 | 100 |
| 1998 | 0 | 0 | 1 | 50.0 | 1 | 50.0 | 2 | 100 |
| 1999 | 0 | 0 | 0 | 0 | 1 | 100.0 | 1 | 100 |
| 2000 | 0 | 0 | 0 | 0 | 4 | 100.0 | 4 | 100 |
| Total | 1 | 8.3 | 2 | 16.7 | 9 | 75.0 | 12 | 100 |

## 15. OHS Investigated Occupational Fatalities, 1996-2000

***Forest Product Manufacturers (9)***

YEAR: 1996 FILE: 0838
OCCUPATION: Labourer - Pulp and Paper Industry AGE: 27
INDUSTRY: Plywood, Chipboard, Strand board and Fibreboard Mills
EXPERIENCE: Unspecified

DESCRIPTION: The self-propelled elevated work platform a worker was using was positioned near a large hydraulic press. The action of the press lifted the platform beyond its normal extended limits. As a result the platform tipped and the railing and hydraulics failed, causing the platform to collapse. The worker fell approximately 4.5 metres to the plant floor, sustaining fatal injuries.

YEAR: 1996 FILE: 0849
OCCUPATION: Carpenter AGE: 43
INDUSTRY: Wood Products, Manufacturing
EXPERIENCE: 10 years

DESCRIPTION: The worker was in the process of assisting eleven other workers to flip a roof section in order to place it on a trailer frame. The section had been raised with a 3 tonne overhead electric chain hoist, to the hoist's maximum height. The section was suspended in an almost vertical position, but was still resting on the ground. Their intent was to push the roof section just past vertical, by having workers push with 38mm x 89mm pieces of lumber placed at the top of the load near the overhead hoist connection. This would allow the hoist operator to then lower the section onto its opposite side.

The roof section was attached to a spreader bar with 150mm long chains, which connected at intervals along the edge of the roof section. The spreader bar was connected to the hoist with a hook equipped with a safety latch. As the workers pushed against the roof section, the spreader bass disconnected from the hook, causing the load to fall back towards the workers. Ten workers were able to run out of the way, one was injured, and the other was fatally injured when he was pinned

YEAR: 1997 FILE: 0878
OCCUPATION: Electrician AGE: 42
INDUSTRY: Plywood, chipboard, Strand board and fibreboard Mills
EXPERIENCE: 19 years in electrical trade (Journeyman Electrician)

DESCRIPTION: Two electricians were making adjustments to the moulding panel stacker outfeed rollcase. The stacker was operating in the automatic mode and the unit was not stopped or locked out by either electrician. One of them crawled underneath the stacker while the other placed himself on the opposite side to assist. When the adjustments were complete, the worker who was underneath the stacker started to crawl back out. The elevator of the stacker descended and pinned him against a lower cross member resulting in fatal injuries.

| | | | |
|---|---|---|---|
| YEAR: | 1998 | FILE: | 0897 |
| OCCUPATION: | Owner/Operator of Cabinet Making Shop | AGE: | 51 |
| INDUSTRY: | Wood Products Manufacturing | | |
| EXPERIENCE: | 14 years | | |

DESCRIPTION: The owner was operating a large computerized table saw known as a "beam cutter". This machine had been installed two weeks prior to the incident and only the owner knew how to operate it. The owner moved from the front of the saw to the back and leaned around the control panel to check or adjust some gauges. As the computer was about to complete the cutting sequence the owner became pinned between the control panel and the edge of the carriage tray where he received fatal crush injuries. When the other workers found the owner trapped, they did not know how to disengage the saw in order to free him. It was not until the fire department arrived that the victim was released.

The investigation concluded that is should not have been necessary for the owner to leave the front of the machine during its operation and place himself in an unsafe position. The manufacturer of the table saw was notified of the incident and since then a safeguard has been installed to eliminate the pinch point.

| | | | |
|---|---|---|---|
| YEAR: | 2000 | FILE: | 950 |
| OCCUPATION: | Journeyman Cabinetmaker | AGE: | 40 |
| INDUSTRY: | Wood Products Manufacturing | | |
| EXPERIENCE: | 10 Years or more | | |

DESCRIPTION: A cabinetmaker proceeded past several racks of wood sheets to a stack of 24 wood sheets leaning almost vertically against the wall. A witness observed the cabinetmaker standing beside the stack of wood sheets, with the cabinetmaker holding some of them on the left-hand side of the stack with his right hand. Some of wood sheets started tipping towards the cabinetmaker, eventually all 24 sheets tipped. The cabinetmaker was forced backwards by the wood sheets, falling and striking the back of his head on the concrete floor. The witness and other workers immediately went over to the Cabinetmaker. He was unresponsive and died two days later as a result of his injuries.

| | | | |
|---|---|---|---|
| YEAR: | 2000 | FILE: | 66 |
| OCCUPATION: | Welder | AGE: | 36 |
| INDUSTRY: | Sawmills and Planing Mills | | |
| EXPERIENCE: | 4 Years | | |

DESCRIPTION: A welder was installing a guardrail and attempted to start the first line conveyor but experienced a problem. A production foreman and an electrician came to investigate. The electrician inspected the motor and found it was burnt out. Discussions followed and a decision was made to start the adjacent second line. The electrician remained by the burnt out motor, and the foreman went to operator's control for the second line. The welder decided to watch the electrician and walked up the second line conveyor belt instead of using the catwalk. The electrician was aware of the welder but assumed that he was standing on the floor. The foreman started the conveyor belt. The welder was either still standing on the belt or inadvertently stepped on it. Falling, the welder was carried by the belt and was caught under a lumber deflector guard.

*There was one fatality in 1999 and two in 2000 that are still under investigation.*

# Appendix A: Terms, Definitions, and Formulas

**Lost-Time Claim**

A lost-time claim (LTC) is a claim for an occupational injury or disease, which disables the worker beyond the day of injury. Included are claims for which wages compensation are paid, permanent disability claims, fatalities, and cases in which the injured worker is assigned light duties or other modified work.

**Person-Years**

Person-year estimates are calculated from wage and payroll data provided by account holders to the WCB. Alberta Human Resources and Employment uses these data to estimate an average industry wage, and uses the average industry wage and employer payroll data to estimate person-years for each employer and each industry. One person-year is equivalent to one full-time worker working for one year, and can be assumed to equal 2,000 hours worked.

**LTC Rate**

The lost-time claim (LTC) rate is calculated by dividing the number of lost-time claims by the person-year estimate, and multiplying the result by 100. The LTC rate represents the probability or risk of disabling injury or disease to a worker during a period of one-year work. Comparisons of LTC rates between industries, or between years, can be used to indicate increases, decreases, or differences in this risk.

$$\text{LTC Rate} = \frac{\text{Number of LTCs X 100}}{\text{Estimated Person-years}}$$

**Duration (Days Lost)**

The duration of disability is the number of days following the injury or disease for which the worker was disabled, and unable to perform normal work duties. This information is obtained for this report from data on compensation days paid on each claim from WCB. Alberta Human Resources and Employment obtains these data on March 31 of the year following the claim year, and does not update the information, even though many injured workers continue to be disabled beyond this date. As a result, the duration information reported here underestimates the true impact of lost-time injury and disease.

**Duration Rate**

The duration rate is calculated by dividing the number of workdays lost (disability days) by the person-year estimate, and multiplying by 100. The result is expressed as days lost per 100 person-years worked, and indicates, in part, the economic impact of occupational injury and disease. Duration rates are not recommended as reliable indicators of full economic cost. In addition, readers are warned that duration rates are highly unstable when based on only a few lost-time claims; it is recommended that the duration rate not be calculated based upon fewer than 30 lost-time claims.

$$\text{Duration Rate} = \frac{\text{Disability Days X 100}}{\text{Estimated Person-Years}}$$

## Appendix B: Forestry and Related Industries 2000 Industry Codes

| | |
|---|---|
| **Forestry** | 3100~Logging and Woodland Operations<br>3902~Timber Management |
| **Forest Product Manufacturers** | 25100~Sawmills and Planing Mills<br>25401~Manufacturing of Wood Products<br>25900~Peeling and Pointing of Post<br>25901~Treating of Timber<br>27102~Pulp Mills<br>27103~Plywood/Chipboard/Strand board Mills |

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